MOBILE APPLICATION DESIGN FOR CLIMBING REGISTRATION AT PAJERO BASE CAMP,

GUNUNG SINDORO VIA ALANG-ALANG SEWU

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ABSTRACT

Mountain climbing in Indonesia has steadily increased each year. One of the most popular mountains is Mount Sindoro, which features the Alang-alang Sewu climbing route, with the Pajero Basecamp serving as a primary registration point. However, the registration process at this base camp is still conducted manually, resulting in long queues and inefficiencies in managing climbers. This study aims to develop an Android-based climbing registration application that enables climbers to register online and make direct payments through an integrated payment gateway. Additionally, this system includes QR code-based check-in and check-out features for climbing validation and a web-based admin dashboard for managing climber data and transactions. The application was developed using Android Studio with the Kotlin programming language, while the backend was built with Express.js and a MySQL database. Preliminary functional testing demonstrated that the system operated according to the prescribed specifications, facilitating a more efficient and precise climber registration and validation process. Implementing this application is expected to enhance the operational efficiency of the basecamp and mitigate the queues that occur during the climbing registration process.

Keywords: Application, Android, Climbing Registration, Mount Sindoro